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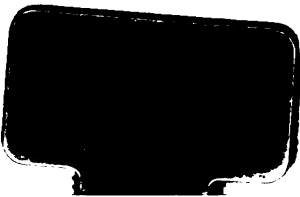
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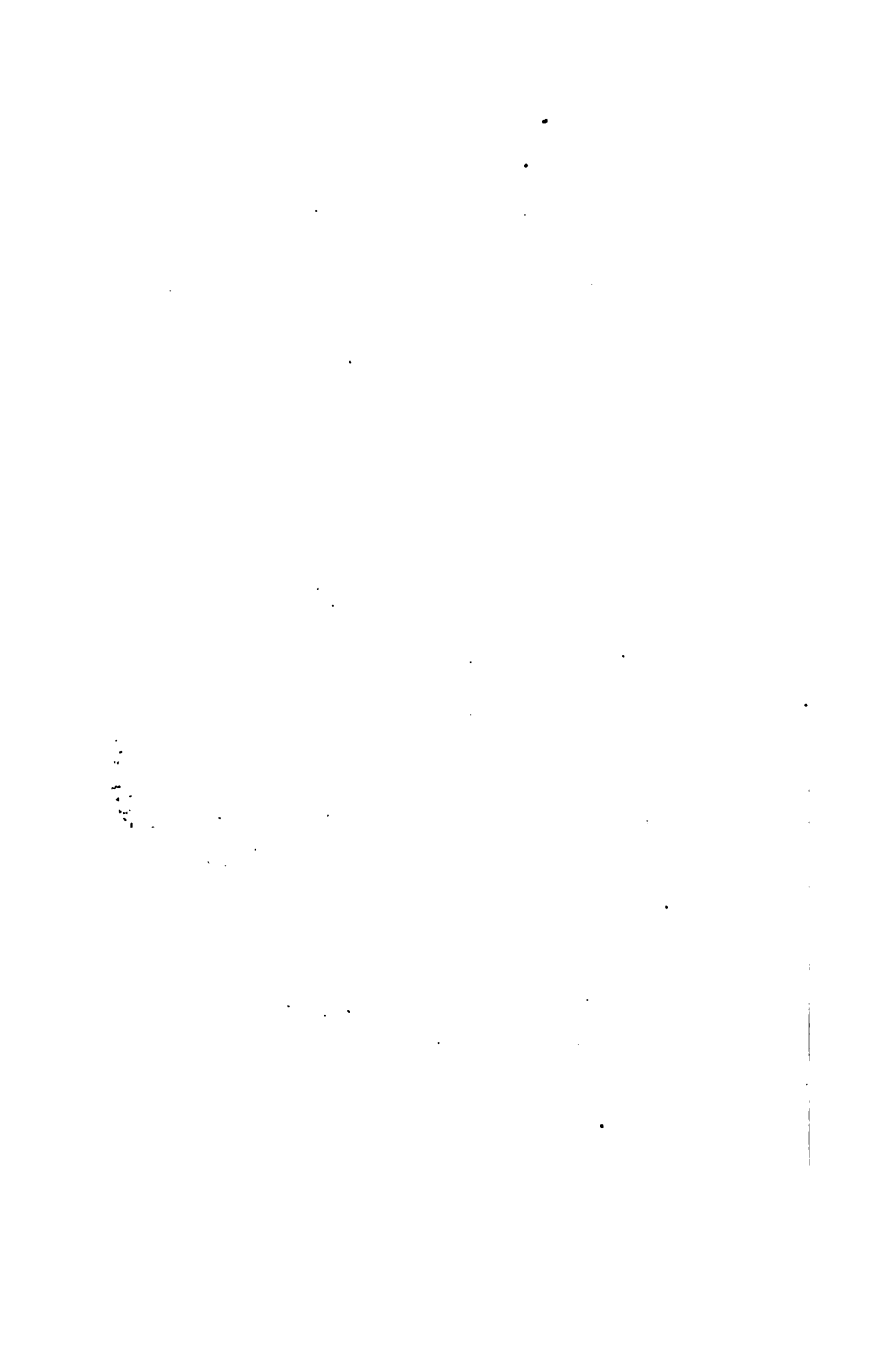
MOSGROVE  
ON  
CONGESTION & INACTIVITY  
OF THE  
LIVER



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A PRACTICAL TREATISE  
ON  
CONGESTION AND INACTIVITY  
OF  
THE LIVER:

SHOWING SOME OF THE EFFECTS PRODUCED  
BY THESE DISORDERS ON THE MOST IM-  
PORTANT ORGANS OF THE BODY.

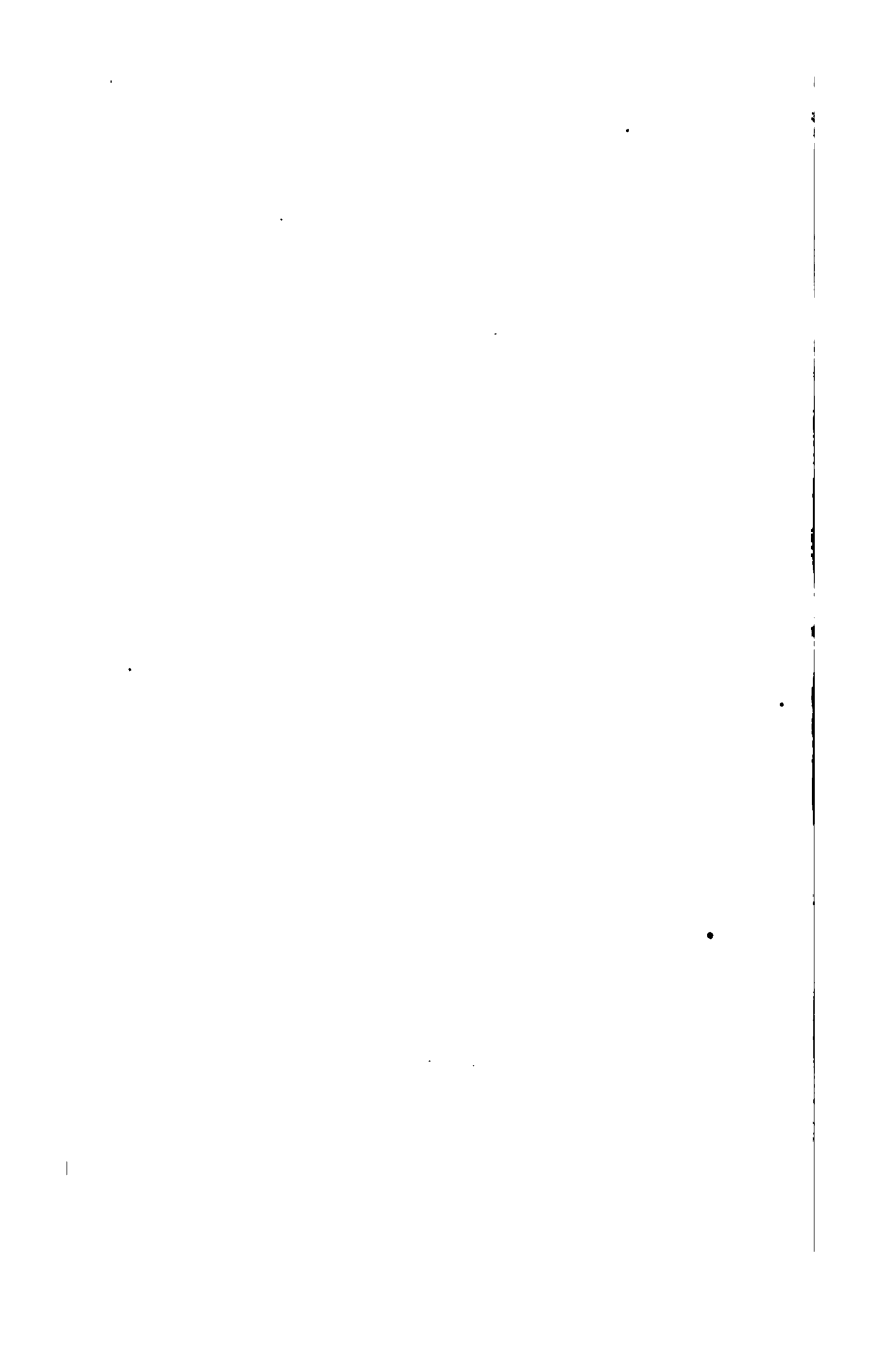
Illustrated by Cases.

BY FREDERICK J. MOSGROVE  
SURGEON.



LONDON:  
SIMPKIN, MARSHALL, AND CO.,  
STATIONERS' HALL COURT.

1843.



## PREFACE.

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I HAVE for several years past constantly had occasion to observe the lamentable consequences which result from neglecting the first indications of Inactivity of the Liver, and the miseries which are entailed on after life by the injudicious employment of remedies for the cure of that complaint.

In every case of severe disorder of the Liver which has come under my observation, I have ascertained that the deranged action was ushered in by symptoms apparently so unimportant as to be either altogether overlooked, or considered of too trivial a nature to require the employment of any remedies.

In order that these symptoms and the consequences of disregarding them might



be more generally known, I have been induced to lay this Treatise before the public.

It has been my desire, as far as possible, to avoid technical expressions, and to treat the matter in so simple a style as to come within the comprehension even of those least acquainted with medical subjects. Should the perusal of these pages cause any to attend more carefully to the action of the Liver, or to adopt more rational means for the cure of disorders of that organ than those ordinarily employed, this work will not have been written in vain.

F. J. MOSGROVE.

*23, Finsbury Place North.*

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## CHAPTER I.

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### CONGESTION AND INACTIVITY OF THE LIVER.

IN order that the subject of the following pages may be more fully understood by my non-professional readers, I shall first explain the meaning of the term "Congestion," and then proceed to give, in as clear and concise terms as possible, a description of the anatomical structure of the Liver, its connexion with other important organs of the body, and the function it is required to perform.

The term "Congestion" implies an overdistended state of blood-vessels, whereby their elasticity is weakened or destroyed, and the circulation of the blood

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in them impeded; \* the necessary effect of which is, either a partial or total suspension of the functions of the part so affected, depending on the degree of congestion, in consequence of each organ of the body requiring a certain rapidity in the circulation of its blood, to enable it properly to maintain its action.

The Liver is the largest secreting organ of the body, and contains a much greater proportion of blood than any other part of the human frame. It is

\* Although the action of no inanimate matter can fully explain the rules by which the living body is governed, yet the following illustration may somewhat assist the reader in comprehending the subject. Thus if a fluid were forced by means of a pump through an India-rubber tube, at each jet of the fluid the tube would first dilate, but again immediately resume its former size, and, by its contraction, assist in the propulsion. Should the tube be obstructed at any part, or the forcing power be much increased, the tube would become distended much beyond its original size; and in proportion to the degree of distention, would its power of contraction become diminished.

situated under the ribs on the right side, and extends towards the left side half way across the abdomen. It is composed entirely of bundles of minute vessels, carrying two descriptions of blood; the one bright red or "*arterial*," the other purple or "*venous*;" it is from the latter that the "bile" is wholly secreted.

The "*arterial*" blood is supplied by an artery, which intimately communicates with those distributed over the stomach. The "*venous*" blood is supplied solely by veins, which return the blood from the stomach and bowels; indeed those veins have no means of emptying themselves but through the medium of the Liver; and I beg my readers to bear in mind this latter circumstance, as it will enable them to understand much, hereafter stated, which would otherwise appear inexplicable.

The "*Liver*" is immediately connected by the distribution of nerves—the medium by which all sensation

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is conducted—with the brain, lungs, and stomach.

The function of the “Liver” is to separate from the venous blood, which is carried to it, certain noxious particles with which it has become charged during its circulation through the body, which particles could not but cause very considerable irritation if allowed to continue in the system. From these injurious particles it forms the secretion which is named “Bile;” and it has been wisely ordered, that this substance, which if distributed throughout the body would produce so much derangement of the general health, is destined to perform most important duties in the animal economy. It is also a wise provision made by the “Great Architect of the Universe,” that although those organs of the body, whose office it likewise is to free the blood from certain noxious ingredients, have an action apparently differing altogether from that of the

Liver, yet the secretion of each contains one or more of the constituent particles of the bile; so that each of those organs, is enabled, by increasing its action, to render to the Liver, when in an inactive state, more or less assistance, in order to remove from the blood every portion of those injurious particles which would otherwise prove a constant source of disorder. Were it not for this arrangement, it is scarcely possible that inactivity of the Liver could exist, even for a short period, without producing effects most prejudicial to the health of the body.

In considering the effect produced by "Congestion and Inactivity of the Liver" on other organs of the body, I shall endeavour to show how, by this peculiar provision of nature, the kidneys, lungs, and skin, are especially influenced by any inactivity in the secretion of bile.

The *action* of the "bile" is to stimulate the intestines to a due performance



of their digestive functions, to separate the nutritive from the injurious portions of food; and, by its stimulating effect throughout its course, to act as the natural purgative of the bowels.

It does not require much reflection to perceive how great and injurious an effect must be produced on the health of the body, by any deviation from a healthy action, in an organ on which so many and important functions depend. Nothing is more common than to hear persons complain of being "*bilious*;" of having a bilious head-ache; of having had a "*bilious attack*;" each one admitting a derangement of the Liver, and yet considering it quite as a necessary evil which can only be palliated by medicines, of which each person has some favourite preparation which they imagine acts as a specific in their particular case.

I shall now point out those circumstances which render the Liver more

liable to congestion than any other portion of the body.

I have before stated, that the substance of the Liver is composed entirely of bundles of minute blood-vessels, all of which are elastic; they possess in themselves no muscular power by which they are enabled to force on the blood contained in them, but are dependant on their own elasticity,—on the action of the muscles of the abdomen, and on the *vis-a-tergo*, or force from behind,\* to keep up a proper activity in their circulation.

My readers will bear in mind what I have before stated, that the blood from which the bile is secreted, and which constitutes much the larger part of that contained in the Liver, is derived solely from the veins, which return the blood from the stomach and intestines. As these veins likewise possess no muscular power in themselves

\* The action of the heart, which, assisted by the contractile power of the blood-vessels, keeps up the force of the circulation.

by which they can increase the rapidity of their circulation, but are dependant on the contraction of the bowels, and on the "impelling force," to enable them to maintain *their* action, it is apparent that the impetus with which the blood is sent to the Liver, must be very slight; indeed so elastic are the vessels of the Liver, and so necessary is it that the blood should circulate through that organ at but a moderate degree of speed, in order to afford a sufficient time for the formation of "bile," that the necessary consequence of a rapid circulation in the veins, carrying blood to the Liver, must be, either a preternatural fulness of its vessels, or a diminution of its secreting power.

Bearing in mind the elastic structure of the Liver, and the peculiar manner in which it is supplied with blood for the secretion of bile, it will readily be perceived how immediately its action must be influenced by anything which

may tend to increase or diminish the general force of the circulation: thus it is that excitement, bodily exertion, the use of stimulating liquors, and sedentary habits, each in their peculiar manner affect the action of the Liver.

From observations which I have attentively made in several hundred cases, I am led to believe that the changes in the state of the Liver which tend most commonly to impair its functions, and give rise to the symptoms termed "bilious," are—

1st. A fulness of blood, with increased irritability (without inflammation), occasioning an increased secretion of bile.

2ndly. "Congestion," or such a distention of the blood-vessels, that their elasticity is greatly diminished, and the power of secreting considerably impaired.

3rdly. Inactivity, or a want of sufficient nervous energy to enable it properly to receive the stimulus of the blood, or to perform its allotted function.

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The two latter are by far the more common, as it is scarcely possible that the former can exist for any lengthened period without the elasticity of the blood-vessels being overcome, and congestion and inactivity resulting.

The ordinary symptoms of increased secretion of bile are familiar to most of my readers; they are,—Irritability of the stomach, with occasional vomiting; “sick head-ache;” and relaxation of the bowels, with great prostration of the nervous power.

The symptoms of “Congestion, and Inactivity of the Liver,” are those to which I would more particularly direct attention, as they are frequently so obscure, even to the practised eye, as to require much judgment and discrimination in detecting them.

In the course of the following pages I shall point out some of the disordered actions occasioned in other organs by inactivity in the secretion of bile, and

shall therefore now confine myself to those symptoms which most commonly indicate incipient “Congestion and Inactivity of the Liver,” and which are too frequently overlooked, until some other disordered action is occasioned which possesses a more manifest influence on the health of the body.

*Symptoms.*

On first rising in the morning, a dull heavy pain across the forehead, with heaviness and disposition to sleep; dryness of the tongue, and unpleasant taste in the mouth; a short cough, which is only relieved by expectoration, generally of a thick dark-coloured substance of an unpleasant taste.

Sleep disturbed by unpleasant dreams; depression of spirits, and irritability of temper; disinclination for business and all mental or bodily exertion.

Frequent palpitation of the heart, with a sensation of weight, or even absolute pain, over the region of that organ.

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Bowels generally inactive, but occasionally profusely purged by fatigue; anxiety of mind; increased exercise of the body, or any sudden emotion of joy or grief.

A sensation of weight at the pit of the stomach after eating, frequently attended with flatulency.

Irritation at the lower part of the bowels, very commonly accompanied by "piles."

Urine thick, and depositing a reddish brown sediment.

Coldness of the hands and feet, with occasional tingling and cramp; the sleepy sensation occasioned by the legs remaining for a short time crossed in one position.

A dull heavy pain across the loins, frequently extending over the hips.

Irritation of the skin, with a sensation of heat, especially over the loins, hips, and inner part of the thighs.

Pains in the right shoulder and arm, resembling rheumatism.

Although all the above symptoms are scarcely ever present in a single case, and are constantly much modified according to the different constitutions of the persons affected, the peculiar appearance of the tongue is invariably the same. Whether the part toward the tip be clean or coated (which depends on the state of the stomach and bowels), the back, towards the root, is invariably covered with a brown fur.

*Causes.*

The causes which induce inactivity of the Liver are various; for so greatly is that organ influenced by any irregularity in the general circulation of the blood, and by whatever tends to lessen or increase the nervous stimulus communicated to it from the brain, that every powerful emotion of the mind, or increased exercise of the body, will immediately affect the secretion of bile.

The causes most commonly in opera-



tion are,—anxiety of mind; the constant use of stimulating liquors; excitement; studious pursuits; and sedentary habits.

The latter occasions congestion of the Liver, by lessening the general force of the circulation of the blood, as also by not calling into constant operation the muscles of the abdomen, by which the Liver is compressed.

The former induce “Inactivity,” in consequence of the nervous power communicated by the brain to the Liver (and on which its activity depends) being lessened: this will be explained when considering the action of the brain.

Let us now examine the principle on which derangements of the Liver are ordinarily treated. If a person be labouring under such symptoms as clearly indicate inactivity in the secretion of bile, resource is immediately had to one or other of the many forms of popular bilious medicines, more especially the mercurial pill and black draught,

which certainly afford a temporary relief, and the sufferer rests satisfied that the derangement is for the present removed; but if we consider for one moment the manner in which these medicines act, it will be apparent to every one, that although the temporary relief they afford is great, every dose thus taken tends but to increase the malady which it is given to remove.

I have before explained in what “Congestion” consists, viz., in an over distention of blood-vessels, whereby their coats are weakened, and their elastic power more or less impaired. The immediate effect of these medicines is to stimulate the blood-vessels of the Liver to a sudden and violent contraction, whereby the congestion is removed, and an increased secretion of bile occasioned.

It is a well known fact, that any sudden unnatural excitement is invariably followed by a corresponding degree of depression; if therefore the Liver be suddenly stimulated, whether by powerful

emotions of the mind, or by any of the before-mentioned bilious medicines, the after-consequences are, depression and weakness; in which state the vessels of the Liver more easily become distended, and congestion and inactivity again ensue

Those persons who have been in the habit of taking any strongly-stimulating medicines for the relief of bilious symptoms, will bear testimony to the inactive state of the Liver and bowels which invariably follows the first effect of such remedies.

Seeing then that the medicines thus ordinarily employed, in their ultimate effect cannot but increase the disordered state of the Liver, it will naturally be asked, what course is to be adopted to restore that organ to a healthy action. Reason suggests that such a course should be followed as would if possible stimulate the vessels of the Liver to so gradual a contraction that the usual depression consequent on sudden excitement may be avoided. I have invariably acted on this

principle; and the experience of ten years, with the success which has attended my treatment of several hundred cases of inactivity of the Liver, lead me confidently to assert, that it is the only mode which can effect a CURE in any case of this very prevalent complaint.

The plan I have adopted has been, to give minute doses of such medicines as tend to stimulate the Liver, frequently and regularly repeated, so that the blood-vessels are GRADUALLY contracted, and, by a continuance of such remedies (for a period depending on the degree of congestion, and the length of time it has existed), are continued in a healthy state; care also being taken strictly to regulate the diet, and to enforce the habit of REGULAR bodily exercise.

The various degrees of congestion require various kinds of stimulants; but the medicines I have found the most beneficial, as well as the most certain in their action, have been, minute doses of calomel, blue pill, and ipecacuanha,

combined with the extract of henbane, or decoction of dandelion.

The doses of the former medicines must be regulated by the state of congestion, and the degree of stimulus required; but never need exceed one sixth of a grain of calomel and ipecacuanha, and a quarter of a grain of blue pill. I have occasionally met with persons who have been so susceptible of the slightest mercurial stimulant, that any preparation of that remedy, even in the most minute doses, has occasioned such general irritation of the system, as totally to preclude the possibility of employing it. In such cases, recourse must be had to other remedies which have a stimulating effect on the Liver; but in almost every person, the effect produced by these small doses of mercurials is imperceptible on the general health; and so safe have I found them in their action, that out of many hundred cases, I have never yet known any injurious consequences to be occasioned by their employment.

## CHAPTER II.

### THE BRAIN.

THE *Brain* is that mysterious organ by which is secreted the nervous power on which the performance of the functions of both mind and body depend. It may be likened to a treasury, on which each function is enabled to draw for whatever support it may require. The power of supplying the demand being limited, it necessarily happens, that if from any cause one function draws more from the treasury of the Brain than it is fairly entitled to, the supply given to the others must be diminished. Thus is occasioned that extreme - sympathy which exists between the mind and body. If the powers of the mind are exercised in excess, the functions of the body are

impaired; and if there be any disorder of the body, which calls for an increased supply of nervous power from the Brain, the functions of the mind become more or less diminished.

The peculiar nervous sympathy which exists between the Brain and Liver is evidenced by the effect produced on the former by any deviation from a healthy action in the latter, and *vicê versâ*: thus head-ache is occasioned by even a slight irregularity in the secretion of bile; and a diminution in the powers of the brain, whether from congestion or any other cause, will frequently so much impede the action of the Liver and bowels, that they cannot be restored to a healthy state without first adopting means to recover the wonted energy of the Brain. The Liver has also other modes of acting on the Brain,—both immediately by the circulation of the blood, and by the disordered action which any irregularity in its functions occasions in

other parts: to the latter I shall have occasion more particularly to allude when considering the derangements of the heart occasioned by inactivity of the Liver.

My readers will remember that the function of the Liver is, to remove from the blood certain impurities from which it forms the bile. If the secretion be not properly formed, in consequence of inactivity of the Liver, more or less of these impurities must continue circulating in the system, thereby causing either general irritation and fever, or depression of mind and body. These different effects are produced according to the degree in which the noxious particles are present in the blood; the action of some being to irritate the system, while that of others is to lessen that stimulating power of the blood which is so necessary to the proper activity of the mind and body.

If those organs (the kidneys and skin)



which are enabled to remove from the blood some portion of the acrid constituents of the bile, be not stimulated to an increased action proportionate to the degree of inactivity existing in the Liver, irritation or fever is occasioned; but if those organs (the lungs and skin) whose duty it is to remove from the blood any excess of the particles which exercise a depressing influence on the body, be not increased in action, depression and inactivity result.

## CASES.

THE Rev. J. H., aged 35, apparently in robust health, and of active habits, consulted me in consequence of having been subject, for a period of seven years, to severe attacks of head-ache, and occasionally such extreme mental and physical depression, as entirely to deprive him of both power and inclination to discharge his usual pastoral duties. These attacks, I ascertained, occasionally appeared without any assignable cause; but almost invariably followed any great excitement, or increase in his ministerial duties. During the paroxysms of head-ache his bowels were inactive, to relieve which he had been in the habit of taking an aperient pill containing calomel, followed by a purgative draught, which, by stimulating the Liver and bowels, generally afforded him relief.

He did not complain of any pain in the region of the Liver, but on examining that organ, I perceived a slight degree of enlargement, with some tenderness on pressure. In

answer to my inquiries, he stated, that he had frequently experienced the following symptoms : Pain in the right shoulder and arm ; slight cough with expectoration ; an unpleasant taste in the mouth on first awaking in the morning ; urine thick, and depositing a sediment similar to brick-dust ; cramps in the lower extremities ; a sensation of weight over the region of the heart, with occasional palpitation of that organ. The bowels were generally acted on *regularly*, but *not freely* relieved ; the tongue was covered at its posterior part with a light brown fur.

In accordance with the plan I have before mentioned, I prescribed,—calomel, 3 grains ; blue pill and ipecacuanha, of each 4 grains ; extract of henbane, 30 grains ; to be carefully mixed and divided into 24 pills ; one of which to be taken three times in the day, with a wine glassful of the decoction of dandelion.

The effect produced in this case was such as would have greatly surprised me, had I not been previously aware of the speedy benefit which frequently followed this plan of treatment ; it certainly was much to the astonishment of my patient. For the first three days

the activity of the bowels, as well as the pain in the shoulder, were somewhat increased, after that time his spirits returned, and nothing but the *absence* of his usual symptoms indicated the exhibition of any remedy. After four days I directed the medicines to be taken only twice in the day, and at the expiration of a week to be discontinued in the morning. My patient continued taking the pill and decoction of dandelion every night for ten days, when I thought the remedies might be safely discontinued. I then pointed out those symptoms which usually indicate incipient congestion of the Liver, and directed him, on a return of any of them, to have recourse again to my prescription; by adopting which plan, I am pleased to say, he has for the last three years enjoyed good health, and been entirely free from those painful attacks to which he had before been subject.

---

Mr. L., a merchant, aged 28, of delicate appearance, had for two years suffered from frequent attacks of severe head-ache, accompanied by derangement of the digestive organs. During the last six months he had become

considerably depressed, both in mind and body, so as to be almost unfit for business, in consequence of extreme lassitude and susceptibility of the slightest cause of anxiety.

On my first seeing him, in addition to the above symptoms, he complained of a dull heavy pain across the loins, attended with much heat and irritation of the skin; pain between the shoulders; an unpleasant taste in the mouth on first rising in the morning; bowels very sluggish; being scarcely ever acted on freely without the employment of some aperient medicine.

In order to relieve the mental depression his usual medical attendant had prescribed for him a stimulating draught, to be taken twice a day, with a purgative pill at night, as often as occasion required: he had pursued this course for some weeks without any permanent benefit resulting. On examining as to the state of the Liver, I perceived a decided enlargement, but unattended by pain on pressure. I prescribed medicines similar in their action to those adopted in the preceding case, and directed him to abstain altogether from busi-

ness for a few days; to take regular exercise, and to adhere closely to a strict course of regimen, which I laid down for him. For several days no improvement took place. . As the bowels continued very inactive I directed a simple enema to be used every morning, but employed no purgative medicines. After persisting in this plan for three weeks, a more regular action of the bowels, and apparently a healthy secretion of bile became restored; but still not with the necessary activity. I then directed a stimulating draught to be taken three times in the day, and the pills to be continued every night. He pursued this course for ten days, by which time his natural spirits had gradually returned, the Liver and bowels had recovered their wonted activity, and his general health become perfectly re-established.

In this case the disordered state of the Liver had caused so much depression of the powers of the Brain, that that organ continued inactive, after the cause of its inactivity had been in a great measure removed; and thus the Liver and bowels, not receiving from the Brain the requisite

nervous energy, were unable to perform their functions with proper activity. Hence arose the necessity of employing a stimulant to restore the wonted power of the Brain.

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Mrs. H., aged 38, of a nervous temperament, had for several years suffered from occasional attacks of severe pains in the face and right side of the head, resembling tic-doloureux; to alleviate which, quinine, and the other remedies usually employed for the relief of that malady, had been constantly resorted to without producing more than temporary relief. I ascertained that these attacks were always accompanied, and frequently preceded, by constipation of the bowels and loss of appetite. In this case I could discover no enlargement of the Liver, neither was there any tenderness on pressure; but my patient complained of having suffered from head-ache on first rising in the morning; unpleasant taste in the mouth; pain, resembling rheumatism, in the right shoulder and arm; frequent palpitation of the heart, and a sensation of weight on the left

side; cramp in the lower extremities; frequent bilious head-ache; bowels generally acted on *regularly*, but not *freely*.

I laid down for my patient's guidance strict rules as to diet; enforced the necessity of taking *regular* exercise, and prescribed very minute doses of mercury and ipecacuanha combined with extract of henbane, to be taken night and morning. I adopted this course for ten days, during which time she experienced an attack of pain in the head and face, but much less severe, and of shorter duration than before. I then prescribed a dose of quinine, to be taken three times a day, combined with other remedies whose action was to increase the powers of the nervous system.

She persisted with these remedies for three weeks, during which period she was entirely free from pain. I then directed her to have recourse to the pills whenever she noticed any symptom indicative of inactivity of the Liver, and to persist in the habit of walking each day should the weather permit. For the last eighteen months she has experienced but two of the attacks of pain (much less intense, and



of shorter duration than before), which were occasioned by great mental excitement.

---

Mrs. H., aged 30, consulted me in consequence of suffering from a severe bilious headache, accompanied by extreme lassitude, faintness, loss of appetite, and general prostration of strength, to which she had been subject from childhood. I ascertained that there was no enlargement of the Liver, although slight tenderness on pressure. She informed me that she had constantly suffered from severe cramps in the lower extremities; pain between the shoulders and in the right arm, as also across the loins; a sensation as if cold water trickled down the back; a short cough with expectoration, and heaviness on first rising in the morning; sleeplessness and unpleasant dreams. The bowels were usually acted on regularly, but occasionally much relaxed by mental excitement, to which succeeded constipation.

In this case I thought it advisable to prescribe medicines to act on the Liver, in a much more minute quantity than in either of the preceding cases, and enjoined strict attention

to diet, and regular exercise. For several days no improvement whatever took place. As the tenderness over the Liver appeared to be somewhat increased, I recommended the application of a small blister, which produced the most beneficial result. The medicines which had previously produced no apparent effect, now occasioned an increased secretion of bile and relaxation of the bowels, which continued two days. I then prescribed tonics, to improve the state of the stomach; and the pills to be taken every night, in order to keep up a healthy action of the Liver.

These remedies proved perfectly efficacious; for after employing them a fortnight, my patient pronounced herself better than she had been for many years. She was free from head-ache; her appetite much improved; and the activity of both mind and body greatly increased.

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Mrs. J., aged 28, had for some years been subject to occasional attacks of head-ache, accompanied by much languor. She stated, that during childhood she was constantly

subject to bilious attacks, attended by relaxation of the bowels; but that during the last few years the bowels had become very inactive; to stimulate which she had been in the habit of taking some kind of aperient pill. On examination I discovered the Liver to be slightly enlarged, but unattended by tenderness on pressure. She had frequently experienced the following symptoms: Flatulency after eating; cramps in the extremities; depression of spirits without any apparent cause; pain in the shoulder and arm, especially after eating; drowsiness on first awaking in the morning, and a feeling as if not refreshed by sleep; rest disturbed by unpleasant dreams; the tongue coated, especially toward the root. I prescribed in this case also, pills containing a minute quantity of calomel, blue pill, and ipecacuanha; to be taken three times in the day, with a draught consisting of equal parts of decoction of dandelion, and infusion of camomile.

After taking two doses of these medicines, they had the effect of causing an increased secretion of bile, and thereby of stimulating

the bowels to greater activity. This continued twenty-four hours, after which the increased action subsided. At the expiration of four days, my patient expressed herself much improved : her rest was less disturbed ; uneasiness after eating entirely removed ; her spirits good ; and the bowels acted on regularly. I then directed the pills to be taken only at night, and the draught twice a day.

This plan was adopted for six days, during which time my patient continued to improve ; she then omitted the pills every alternate night, and took a draught only in the morning. At the expiration of fourteen days, I thought the medicines might with safety be discontinued, as my patient appeared in every respect restored to health. She has found it necessary to have recourse occasionally to my prescription, upon perceiving some of her ailments returning ; but for some months past her health has been good.

## CHAPTER III.

### THE HEART.

THE Heart is a muscular structure, and may be described as the forcing pump by which blood is propelled from the centre to every other part of the body. It is composed of two divisions, one of which receives the carbonized or venous blood, which has circulated through the body, and sends it to the lungs to be purified; the other receives the purified blood from the lungs, and sends it for distribution throughout the body. The tubes which convey the blood from the Heart are termed *arteries*; those which return it to the Heart, *veins*.

The effects produced on the Heart by congestion and inactivity of the Liver, I have invariably found to be greatly

dependant on the degree in which the several secreting organs make up for inactivity of the Liver; these effects are produced through the medium of the circulation of the blood, and may be described as twofold.

1st. Increased action.

2ndly. Diminished action.

The former effect is occasioned in accordance with the natural law, that wherever a part be disordered, so great is the sympathy existing throughout the body, that those organs which have any immediate influence in removing the derangement are stimulated to increased action.

As the Liver contains so large a quantity of blood, whenever its circulation is impeded, the Heart is called on to increase its action, in order to propel the blood with sufficient force to assist in removing the obstruction.

This increased demand on the powers of the heart commonly occasions increased

action, which, if allowed to continue for any length of time, results in disease.\* In this manner enlargement of the Heart is very frequently induced, as that organ, in common with other muscular structures, increases in size in proportion to the work it performs;† but the Heart, unlike other muscular structures, does not increase in power as it enlarges in size; on the contrary, its elasticity, and power of contraction, become diminished. This is owing to a peculiarity in its mechanism, which it is needless to explain to the general reader.

Not only do we find that the muscular structure of the heart becomes altered in consequence of long continued irritation,

\* Disease consists in an alteration in the structure of any part, whereas disordered action may exist without any such change having taken place.

† Thus the arm of a blacksmith, and the muscles by which the legs of a tailor are crossed, are larger in proportion to the rest of the body.

but the minute valves which regulate the quantity of blood received by, and discharged from it, likewise become diseased; the arteries also which are immediately in connexion with the Heart frequently become enlarged, and their coats weakened in consequence of a long-continued increased action.

Bearing these circumstances in mind, we shall readily perceive how great must be the effect in this manner produced on the brain, by congestion of the Liver.

Thus the same beat of the Heart which forces blood to the-organs of the abdomen and the lower extremities, also sends it to the brain and the upper parts of the body; and although the vessels which carry it to the latter do not arise immediately from the Heart, yet so closely are they connected with it, that the circulation in them is instantly affected by any irregularity in its action; therefore when the



action of the Heart is increased, in the endeavour to overcome congestion of the Liver, the blood is sent to the brain and upper parts of the body, where no increased action is required, with the same degree of power as to the abdomen where the impediment exists. The tortuous course which the arteries take towards the brain, whereby the impetus of the blood is checked, prevents that organ being so immediately affected by increased action of the Heart as would at first sight be imagined; but yet the brain cannot fail after a lapse of time to be sensibly affected; for as the vessels of the brain have no power besides their elasticity by which they can force on the blood contained in them, it will readily be perceived, that if that elastic power be diminished, by a long continuance of increased action, the brain becomes more dependent on the action of the Heart, to enable it to maintain its circulation; and

therefore if the contractile power of the Heart be diminished, in consequence of a change in its structure, the circulation in the brain not only becomes impeded in consequence of the diminished impetus with which the blood is sent to it, but as the other division of the Heart receives the blood from the brain and sends it to the lungs to be purified, that division being likewise incapable of discharging the blood from it with the natural rapidity and force, the valves which regulate the quantity of blood received by the Heart, when in a healthy state, prevent the veins emptying themselves of the blood which is returning from the brain faster than the Heart is capable of discharging it, and thus is the circulation doubly impeded. Should these valves be diseased and incapable of preventing an excess of blood entering the Heart, that organ is liable to become preternaturally distended, in which case its contractile power becomes still more diminished and even

altogether put a stop to. In this manner are occasioned the apoplectic attacks and sudden death to which persons labouring under disease of the Heart are so especially liable.

But the Heart frequently not only resists the call made upon it for increased action, but its propelling power becomes diminished when there is in the blood an excess of the sedative particles of the bile ; for the Heart, as well as the brain and every other part of the body, being dependent on the stimulating power of the blood to enable it to perform its functions, if that stimulus be from any cause diminished, the contractile force of the Heart becomes lessened, and thereby also the brain becomes affected and headache and languor are occasioned. It is in these cases that tonics and stimulants produce such beneficial results ; and many of my fair readers can, I doubt not, bear testimony to the relief which a few drops of sal volatile, eau de cologne, or red

lavender has afforded in this form of head-ache.

If irregularity in the action of the Heart can be thus induced, and disease ultimately occasioned in consequence of congestion of the Liver, it needs no argument to show how greatly any disease of the Heart or brain may be aggravated by such congestion, although it may not have existed until after the disease of those organs has been set up. Certain am I that there is nothing which will so much tend to diminish the danger and suffering attendant on such diseases as a careful attention to the secretion of bile.

## CASES.

Mr. M., a merchant, aged 44, consulted me in consequence of suffering from much pain in the region of the Heart, attended by palpitation, disposition to sleep, and occasionally extreme giddiness, to which he had been subject for several months, but which had latterly very much increased. On examining the Heart, by means of the stethoscope, I ascertained that its substance was enlarged, and the valves partially diseased.

On inquiring into the habits of life and state of health of my patient previous to the derangement of the Heart appearing, I learned that during the earlier period of his life he had lived freely, and been constantly subject to derangements of the Liver and stomach.

In addition to the symptoms above mentioned the following now presented themselves: Bowels very sluggish, requiring an aperient to produce a free action; irritation of the lower intestine with piles; appetite very variable; much flatulency and drowsiness, occasioned by even a moderate meal; and a

tingling sensation in the fingers. I found the Liver much enlarged, but devoid of tenderness on pressure ; although my patient informed me that he frequently experienced much pain in the part after taking more than his accustomed quantity of wine or undergoing any unusual mental or physical exertion.

I laid down very strict rules to be followed as to diet, restricting him to the plainest food, and directing that his meals should be taken at regular intervals ; that sherry or weak brandy and water should be substituted for port wine ; but that he was not to take less of stimulants than he had previously been accustomed to, and that he should take a moderate degree of exercise, avoiding both excess and fatigue. I thought it necessary to prescribe but little medicine ; merely ordering a few drops of a mineral acid with a small quantity of saline aperient to be taken every morning, and a pill, containing one-sixth of a grain of calomel, and blue pill every night ; an astringent ointment, composed of powdered galls and opium, to be applied to the piles night and morning.

At the expiration of six days my patient expressed himself much relieved. The palpitation was neither so frequent nor violent ; the disposition to sleep greatly diminished ; bowels acted on freely once in each day ; appetite improved, and the uneasiness after eating much lessened. There had been no return of the giddiness. I then directed the pill to be omitted every alternate night, but the draught to be taken as before.

As my patient continued to improve, I gradually discontinued the medicines, but directed him again to have recourse to them should he perceive a recurrence of any of his former symptoms.

In accordance with my advice, he has occasionally taken the medicines for a day or two whenever he has experienced any unusual pain or uneasiness in the region of the Heart : by this means, I am pleased to say, he has for some months past been much improved in health ; the giddiness has not returned, and he expresses himself to feel much better, both in health and spirits, than he had done for a long time previous to his adopting the remedies I

prescribed for him. Although it is quite beyond the power of medicine to remove the disease existing in the Heart, yet I am fully of opinion that its progress may be much retarded, if not entirely checked, by a steady adherence to the rules I have laid down for him.

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Mr. S., aged 50, consulted me in consequence of having become suddenly insensible for a moment whilst sitting at dinner. I ascertained that he had, for two years, suffered from a sensation of weight in the region of the Heart, with occasional pain and palpitation. He had sometimes felt more than usually heavy and disposed to sleep; but otherwise had hitherto been entirely free from giddiness and every other symptom indicative of a deranged circulation in the brain. His habits had been usually regular and temperate; but he had suffered much latterly from indigestion and also heaviness, and frequently head-ache on first rising in the morning: this he had attributed to derangement of the Liver, he having been, he said, always very bilious. By making further inquiries I elicited that his



bowels were very sluggish, and had been particularly so the last few days; appetite moderate, but much uneasiness after eating; spirits frequently much depressed.

On examining the Heart, I ascertained that disease existed very similar to that mentioned in the preceding case. The Liver did not appear to be altered from a healthy size or structure.

Greatly to the astonishment of my patient and his family, I did not think it necessary to bleed him, but prescribed a draught very similar to that employed in the preceding case, to be taken three times a day, and a mild mercurial pill every night. I persisted in this course for ten days, gradually diminishing the strength of the medicines: my patient then expressing himself improved, I directed the pill to be omitted every other night, and the draught to be taken every morning. At the expiration of three weeks the medicines were entirely discontinued.

Mr. S. has since informed me that his spirits have been much improved; the pain and palpitation of the Heart greatly subdued;

and all symptoms of disordered circulation in the brain dispersed, since adopting the means I recommended for him.

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In these cases it is impossible to say whether or not disease of the Heart was occasioned by derangement of the Liver and stomach; but certain it is that there was no symptom of disease of the Heart until the derangement of the Liver had for some time existed. In both cases the important influence exercised by the Liver on the disease of the Heart is abundantly evidenced by the relief which was afforded by a careful attention to the action of the Liver, stomach, and bowels.

I have selected these cases out of many which have come under my observation, to show the influence of the Liver on the Heart, and, through the medium of that organ, on the brain.

It has been by far too commonly the practice of medical men immediately to

have recourse to bleeding and other depletory measures, to relieve symptoms of congestion of the brain, without inquiring as to the cause of the congestion ; so that although much temporary relief is generally afforded, it too frequently happens that depletory measures tend to render the patient more liable to a recurrence of the attack.

Every person afflicted by disease, especially if attended with much pain, is naturally anxious for a speedy restoration to health, and the skill of the physician is measured by the rapidity with which the various painful symptoms are removed ; indeed, the public has no other means of judging of the professional knowledge of a medical man. But how frequently does it occur that one is deemed inferior in skill to another, in consequence of his remedies not having afforded relief as speedily as those employed by the other ; whereas he was attacking the remote cause,

and treating the symptoms as but of secondary importance ; whilst the other, perhaps, unable to discover the cause, administered remedies for the relief of the symptoms alone ; and although the health of the one patient may afterwards continue good, whilst that of the other very shortly again becomes impaired, the recurrence of the disorder is not ascribed to the true cause, but is either attributed to some particular circumstance, or, as is frequently the case, the symptoms appear to the patient so remote from those before experienced, that they are considered as indicative of a totally different complaint. It is my confident opinion that nothing will tend so much to the success of the practitioner of medicine as the habit of pointing out, in a simple manner, to those patients who are capable of comprehending him, the nature of the disorder under which they are labouring, its cause, and the plan of treatment to be adopted in order to remove it ; by so doing, he not

only increases their confidence in his skill, which of itself is of vast importance, but leads them to enter more fully into their various symptoms, whereby he is frequently enabled to discover some slight connecting link which he had wanted to make the chain of symptoms from the cause to the effect complete.

It is a curious fact, that the most prominent symptoms of congestion of the vessels of the brain occasioned by debility of the system, and the same state owing to a general plethora or excess of blood, are precisely similar; and it is only by a careful attention to the state of the pulse, and a close inquiry as to the symptoms previously experienced by the patient, that the medical attendant is enabled to discover the true nature of the disorder.

In the cases I have just mentioned it was evident to me, that the increased fulness of the vessels of the brain was to be attributed to a diminution in their con-

tractile power rather than to increased action: I therefore prescribed a mineral acid combined with a saline aperient, which I have invariably found most beneficial in such cases; the effect of the acid being to increase the contractile power of the blood-vessels, and to give tone to the system generally, whilst the aperient gently stimulates the bowels and removes any substance which may be causing irritation.

In either of these cases the effects of depletion would undoubtedly have been to relieve the symptoms for a time; but the after consequence must have been to diminish still more the elasticity of the blood-vessels, and thereby to render them more liable to become again congested.

The popular idea, that the third apoplectic attack is most likely to prove fatal, is founded on this circumstance. To relieve the first attack bleeding and other means of lessening the quantity of blood are had recourse to; the patient is for a

time free from uneasiness in the head, when again, from some cause, commonly so slight as to pass unnoticed, the action of the Liver becomes impeded, or the propelling power of the Heart impaired; whereby the vessels of the brain are again congested, even more than before; again the same means are had recourse to with the same result, until the blood-vessels of the brain become so weakened, that they are not only more easily distended, but become so much congested, that they allow the exudation of blood on the brain, and death ensues.

It cannot be denied but that bleeding is frequently absolutely necessary, and indeed the only remedy which can prevent a case of simple congestion terminating in rupture of a blood-vessel of the brain, when the medical attendant is not consulted until the period of the apoplectic attack; but very much may afterwards be done towards preventing a recurrence of attack, by carefully ascertaining the cause

of the congestion, and adopting measures either to remove, or if that be impossible, to diminish the cause, and at the same time to render the brain less susceptible of its influence.

The following case will serve to show the first effect most commonly produced on the Heart by congestion and inactivity of the Liver, and which, if allowed to continue, will generally terminate in disease.

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#### CASE.

Mr. K., aged 26, consulted me in consequence of suffering from a sensation of constriction of the chest, occasioning a constant inclination to sigh, accompanied by a feeling of weight in the region of the heart, with occasional palpitation. He also suffered much from a dull heavy pain across the forehead attended by a great depression of spirits. In addition to the above symptoms he complained



of flatulency and general uneasiness after eating; sickness in the morning; sleep disturbed by unpleasant dreams; a pain in the right shoulder, as also between the shoulders and across the loins; the tongue presented the appearance I have before mentioned, as invariably indicative of inactivity of the Liver; the bowels were usually acted on regularly.

On examining the Heart, I could discover no alteration in the structure of that organ. Being confidently of opinion that congestion and inactivity of the Liver was in this case the remote cause of all the symptoms under which my patient was labouring, I prescribed for him medicines whose action was to increase the activity of that organ. For several days no improvement took place; the only alteration in the symptoms being that my patient experienced a pain in the region of the Liver. Having frequently remarked the beneficial effects occasioned by the abstraction of even a small quantity of blood in cases of obstinate congestion of the Liver, I determined now to have recourse to that remedy, and bled my patient to the extent of eight ounces. Although

this produced no apparent effect on the symptoms generally, the benefit that was likely to result was speedily manifest in the altered action of the medicines, those remedies which had previously produced no apparent effect on the action of the Liver (although their stimulating effect was evidenced by the pain occasioned), now that the congestion was somewhat relieved by the abstraction of blood, occasioned a profuse secretion of bile, and a greatly increased action of the bowels. From the period at which this effect was produced my patient gradually improved; after a few days I thought it advisable to diminish the quantity of medicine, and gradually discontinued it altogether: my patient has since enjoyed good health, being entirely free from any painful symptoms.

## CHAPTER IV.

### THE LUNGS.

THE Lungs occupy a most important position amongst those organs whose duty it is to assist the Liver in rendering the blood fit for the nourishment and support of the body; therefore it is that congestion, and other derangements of the Liver, exercise a much greater influence on the Lungs than has generally been imagined. The intimate connexion which exists between these organs, through the medium of nerves, has been generally supposed to be the only immediate cause of the one part sympathising in any derangement of the other; but there is another connexion between the Lungs and the Liver, which I believe to be not only in very constant operation, but the principal

cause of derangement of the Liver and stomach, setting up disease of the Lungs.

In order that this connexion may be understood it is necessary I should state, that the principal impurity with which the blood becomes charged during its circulation through the body is a substance termed carbon, which destroys its stimulating effect and renders it unfit to support the powers of life. This carbon is again removed from the circulation, in a healthy state of the system, by the secreting organs of the body, but especially by the Lungs. The blood in its passage through the Lungs comes in contact with the atmospheric air, with one of the gases of which (*oxygen*) the carbon unites, forming a chemical composition termed Carbonic Acid, which is expired in the form of a gas. In consequence of being thus freed of carbon, the blood, which was in a dark purple state (*venous blood*) previous to entering the Lungs, reassumes its bright red colour (*arterial blood*), and becomes

capable of repairing the natural waste of the body.

It is a wise provision in our nature, that if from any cause one organ is incapable of properly performing its functions, the other organs whose duties are similar, become sensible of the increased action they are required to perform, and are stimulated to greater exertion; thus it is that the body is not so entirely dependent on the action of any one secreting organ, but that the action of either may for a short time be suspended without danger to life. True, indeed, is it "that no machine, except the animal machine, has the power of removing spontaneously the dangers hanging over itself." In accordance with this prescribed rule of nature, whenever the Liver (which removes from the blood a larger quantity of carbon than any other part of the body excepting the Lungs) is unable properly to discharge its functions, a larger quantity of carbon is sent to the Lungs in order to be there removed from the system.

It is a fact too well known to require any argument to support it, that each part of the body is capable only of sustaining a certain amount of work ; therefore, if long exposed to irritation, or stimulated to increased action, the functional power will first become impaired and disease ultimately ensue. It is thus that inactivity of the Liver, by causing an increased quantity of carbon to be carried to the Lungs, irritates them to increased action, and is not only the most common cause of that short hacking cough, which is termed a *stomach cough*, but also of *asthma*, and that blight of many of England's brightest and fairest flowers, *consumption*.

Were it not for the power which every portion of our body possesses of resisting the exciting causes of disease, it is not possible that we could remain in a healthy state even for an hour : so many and various are the influences to which we are exposed, which would otherwise produce disease, even the very atmosphere

which we breathe would have a powerful tendency in producing disorder.

Predisposition to disease of any part, consists in a want of the necessary power of resistance; and an individual's constitution is said to be strong or weak according to the degree in which this power is possessed.

Predisposition may exist throughout life without actual disease taking place, unless some exciting cause be set up. Seeing, then, that this is the case, how greatly it behoves every one who is aware of inheriting a predisposition to a particular disease, to ascertain those causes which are likely to affect this predisposition, so that every thing which can tend to produce such causes, may be most carefully avoided.

It is well known that throughout the whole animal kingdom disease, or predisposition to disease, in the parent is more or less communicated to the offspring.

It may naturally be asked, How is it

that the hereditary predisposition to disease is not always manifested shortly after birth, or at the tender age of childhood, when the body appears so weak as to be incapable of offering any effectual resistance to the many causes of disease? Here also is manifested the wisdom and goodness of the Almighty Architect. During the period of childhood every part of the body is endowed with a greater degree of vitality (is supplied more liberally with blood and nervous power) than is possessed after the age of puberty, in order that the growth and formation of the body may be properly carried on.

The power of resistance to disease depends on the degree of vitality possessed by the body: thus it is that during the first eight or ten years of life, children are not so likely to manifest any hereditary predisposition, in consequence of the vital powers being so strong as to be enabled to overcome the ordinary exciting causes of disease; but as soon as the formation



of the body is completed, and the increased vital power is withdrawn, then it is that the predisposition becomes apparent, in consequence of the power of the disease being greater than the healthy power of resistance.

When a child evinces a precocious intellect, if he have any hereditary predisposition to disease, it becomes evident before the period at which such diseases usually appear; but if he be free from any particular predisposition, either general weakness of the body, or disease of the brain, must inevitably result: the cause of which is, that almost the entire power of the brain is required to keep up that activity in every function of the body which is necessary to effect the proper growth of the frame. If the brain be unduly employed in any other way—that is, by maintaining the intellectual powers—the growth of the body must be impaired, or the brain, being incapable of secreting the requisite nervous power for the supply

of both functions of mind and body, must inevitably become diseased, upon the principle I have before stated, that no organ of the body can be exposed to irritation, or stimulated to increased action for any lengthened period, without disease ultimately ensuing. Thus also in mature age, if one particular function of the mind be unduly exercised, the power of the other functions is in some measure diminished; and if the whole powers of the mind be called into excessive operation, the functions of the body become impaired: thus is it that sudden emotions of the mind produce so much influence on the body. It is wisely ordered that in a healthy state of the system, during childhood, the power of the intellect is weak, in order that the brain may be enabled effectually to perform its important duty in furthering the growth and formation of the body; and the power of the intellect only increases as the body progresses in growth, and therefore does

not require so much of the energy of the brain, which organ is then enabled to spare a greater portion of its power towards the developement of the mind, and the mind does not become perfected until the growth of the body is completed. Although it is a well established fact, that disease, especially of the Lungs, where there has been an hereditary predisposition, makes its first appearance about the age of puberty, still it must be evident that the period at which the disease first shows itself, must entirely depend on the degree of predisposition, and the power and extent of the exciting causes; and experience leads me to assert, that by a careful attention to the functions of those organs which if inactive must call for increased action of the Lungs, and by strictly avoiding whatever could tend to irritate the Lungs, not only may the appearance of the disease be retarded, but the predisposition virtually overcome.

The following cases will serve to illustrate the power which inactivity of the Liver possesses of inducing disease of the Lungs,\* and I would here mention, that I have invariably remarked, that whenever consumption has for the first time appeared in a family, either one or both the parents have for a long period suffered from aggravated derangements of the Liver.

\* It may here be remarked as a curious fact, showing how high organization enables a part to resist absolute disease, that the function of the Liver may be deranged throughout life, and occasion disease in many parts of the body; yet upon examination after death, that organ not only present no appearance of disease in itself, but scarcely any evidence of disordered action having existed.

## CASES.

I was requested to visit Mr. R., aged 18, whom I found labouring under the following symptoms of disease of the Lungs: Frequent cough with expectoration; rapid pulse; nocturnal perspiration, and general emaciation of the body. I was informed that the symptoms indicative of a disordered state of the Lungs had only appeared a few days previously, but that he had, six weeks before, suffered much from an attack of jaundice, since which period there had been much derangement of both the Liver and stomach. On inquiring as to the family predisposition to disease of the Lungs, I ascertained that both the parents suffered much from derangement of the Liver and stomach, and that two sisters of my patient had died of what is termed a "rapid" consumption.

On examining the Lungs, by means of the stethoscope, I ascertained that, contrary to my expectation, no disease had as yet been set up. The Liver I found somewhat enlarged,

and so tender that a violent inspiration was occasioned by even slight pressure.

Believing the Liver to be the cause of all the derangement from which my patient was suffering, I directed my attention chiefly to the state of that organ, and although I prescribed remedies to allay the irritability of the Lungs, I depended entirely on minute doses of those medicines whose action was to remove the congestion of the Liver, at the same time causing slight counter irritation over the region of the Liver by the application of a blister. I directed my patient to have nourishing diet; to take as much exercise as possible without fatiguing himself, between the hours of eleven A. M. and one P. M.; and to be especially guarded against all exposure to sudden atmospheric change. No decided improvement was manifested for four days, but at the expiration of that time the cough was much abated, the appetite improved, and the perspiration greatly lessened. I persisted with the same remedies for fourteen days, and had the gratification during that time of seeing my patient gradually improve both in

health and strength. I then advised his removal for a short time into the country, and the medicines to be gradually discontinued. Three years have now elapsed, and he continues free from every symptom of disorder of the Lungs, his general health being very good. He has been particularly watchful as to the action of the Liver, and on noticing the slightest derangement immediately has recourse to my prescription. Two members of the family have since manifested the same tendency to disorder of the Lungs; but by carefully attending to the state of the Liver and stomach they have hitherto escaped disease, and are now in the enjoyment of good health.

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I was consulted on the case of Miss C., aged 16, who had for several years evinced a weakly constitution, having been subject to glandular enlargement of the neck, and sore throat. For the last two years she had been frequently subject to head-ache; pain between the shoulders; indigestion; and relaxation of

the bowels; the latter chiefly occasioned either by unaccustomed exercise of the body, or sudden mental emotion. In addition to the above ailments I found her now labouring under symptoms very similar to those mentioned in the preceding case, clearly indicating such a state of the Lungs as would speedily terminate in consumption if the exciting cause were not removed. In this case also I ascertained, by examining the Liver, that much derangement of that organ existed, and prescribed medicines similar in their action to those mentioned in the preceding case.

I recommended a light nourishing diet, and that two glasses of Madeira wine should be taken each day, but to be discontinued should it be found to increase the cough. Although my patient expressed herself unable to walk for more than a few minutes without fatigue, I recommended her, in addition to a short drive, to walk out each day as far as her strength would permit. I employed these means for ten days without any beneficial result being manifested; but at the expiration of that time a favourable change became



apparent; her strength was somewhat increased, she being capable of walking further each day; the cough less troublesome; and the appetite improved. I continued the employment of the remedies, with the addition of a stomachic tonic, for three weeks, during which time a gradual improvement took place: at the expiration of that period I recommended her removal into the country, where her health ultimately became greatly restored. Although she has not since been in the enjoyment of good health, yet she has been free from all symptoms of disease of the Lungs, and has generally had better health than previous to my attendance on her.

In this case also I was enabled to trace much hereditary predisposition to derangement of the Liver, one of the parents having suffered slightly and the other in a more aggravated degree from functional derangement of that organ. In either of these cases had remedies been employed solely to relieve the irritability of the Lungs, disease and death must have terminated the scene; for while the exciting cause was in operation

no remedies could do more than give temporary relief. It has unhappily been my lot to be consulted in cases where the disorder of the Liver has been allowed to continue for so long a time that disease of the Lungs has been occasioned. In some cases where absolute disease has only recently commenced, by carefully treating the disease, and at the same time removing the disordered action of the Liver, I have been enabled considerably to retard the progress of the malady, and in some instances apparently to remove it altogether. But where the Lungs have been diseased for some time very little relief can be afforded by any such means; for I have invariably found, even in cases where there was originally so much derangement of the Liver as to leave no doubt as to the important effect it produced on the Lungs, that as the disease of the Lungs manifested itself it had a counter irritating effect, and thereby lessened the disorder of the Liver; for as the former malady increased the latter became, in a corresponding degree, diminished; and, on examination after death, there was no evidence

of any derangement of the Liver having existed.

I have before mentioned that bronchial irritation and asthma are frequently occasioned by inactivity of the Liver; the following cases will show how much benefit may be derived in such cases by carefully attending to the secretion of bile.

Mrs. M., aged 42, had for two years suffered from a cough attended by much viscid expectoration. I was requested to visit her in consequence of her being suddenly attacked with asthma. I found her labouring under severe difficulty in breathing, and was therefore under the necessity of immediately having recourse to those antispasmodic medicines whose action has been found beneficial in such cases. They produced the desired effect, and I then proceeded to inquire more particularly into the symptoms previously experienced by my patient; when I ascertained that, for several years previous to the cough appearing, she had been subject to attacks of

severe head-ache; frequent constipation of the bowels; palpitation of the heart; a sensation of fulness in the region of the Liver; and derangement of the stomach. On examining the Liver I found it considerably enlarged, but devoid of tenderness on pressure.

I recommended a continuance of the antispasmodic medicines, in order to prevent, if possible, a recurrence of the attack, and at the same time prescribed medicines to stimulate the Liver and bowels. I persisted with these remedies for a few days, when I determined, in addition to the remedies to stimulate the Liver, to have recourse to medicines which would tend to give a tone to the system, and by regulating the diet so that much nourishment might be taken without overtasking the stomach, endeavour so to stimulate the vessels of the Lungs to contraction, that the congestion on which the increased secretion and cough was dependent might be removed. This plan was pursued for several weeks; and although many days elapsed without any benefit resulting, yet the ultimate success proved beyond my most sanguine expectations.

My patient has for several months past been free from cough, except on being exposed to a sudden alteration in the temperature of the atmosphere, and there has not been the slightest symptom of a return of the asthmatic attack.

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Mr. S., aged 54, had for several years been subject to a cough, attended with much bronchial secretion. During the last two years this had considerably increased, and the breathing become so much impaired, that on my visiting him he was unable to take any active exercise, and frequently suffered so much difficulty in breathing as to be unable to sleep, except with his head much raised.

I ascertained that the increased difficulty of breathing was generally ushered in by palpitation of the heart, and that constipation of the bowels, or the presence of any irritating food in the stomach, would generally induce the attack. I also learned that he had, from childhood, suffered much from congestion and inactivity of the Liver and bowels, causing head-ache; indigestion; irritation of the

kidneys; and occasionally eruptions on the skin.

Although in this case the bronchial derangement had apparently become so fixed a malady as to be entirely independent of the derangement of the Liver, yet as I found that organ much enlarged, I determined on prescribing medicines to increase its action, at the same time that I employed remedies whose action was immediately on the air tubes. By adopting this course much relief was speedily afforded; and although the cough continued, yet the difficulty of breathing was so much diminished, that my patient expressed himself better than he had been for three years past. He has occasionally found it necessary to have recourse to some pills which I prescribed for him, in order to stimulate the Liver and bowels; but since taking them, he has not been so subject to constipation, as their action on the bowels has been so gentle as to be unattended by that inactivity which had invariably followed the employment of the remedies he had previously taken.

## CHAPTER V.

### THE SKIN.

THE sympathy between the Liver, stomach, and Skin, is acknowledged by all; but the manner in which eruptions on the latter are occasioned, and kept up, by a deranged action in the former organs, is not so generally understood.

In speaking of the action of the Liver, I mentioned that it was assisted in the performance of its functions by other parts, whose duty it was to separate from the blood fluids apparently differing altogether from the secretion of the Liver; of these parts the Skin renders most powerful assistance in removing from the blood whatever is prejudicial to health, by means of those minute ducts, or pores, with which it is so plentifully supplied.

That the Skin has the power of removing certain deleterious particles from

the blood, is strikingly exemplified by the injurious effect produced on the system by an endeavour to check any of the ordinary eruptions of the Skin by external applications, without employing such internal remedies as tend to increase the action of other secreting organs. The presence of these eruptions invariably indicates such a disordered state of the blood, as to require an increased action of the Skin to carry off the impurities. These deleterious particles irritate and inflame the vessels of the Skin, whereby is occasioned the eruption. If, therefore, an endeavour be made to check the effort of nature to get rid of that which is injurious, by sending back the eruption, the necessary consequence is, that the impurities continue in the system; and there being at all times a manifest effort of nature to get rid of whatever is prejudicial to health, the Liver and kidneys are required to increase their action. Should these organs be inactive, or not susceptible of the increased stimulus



(as is most commonly the case in such disorders of the Skin), it is evident that this noxious blood must continue to circulate in the system, thereby occasioning most serious derangement in the action of every part of the body.

It is true that disease of the Skin constantly occurs totally independent of derangement of the functions of the Liver; but experience leads me to assert, that no such disease can exist for more than a few days without inducing irregularity in the secretion of bile, which irregularity then tends to keep up the disease of the Skin, precisely in the same manner, and to the same extent, as if it had been the original complaint; and remedies must be had recourse to which will restore the Liver to a capability of properly discharging its functions before the Skin can resume a healthy action.

The extent of surface presented by the Skin, and the large quantity of blood contained in the vessels which are distributed

through it, is another cause of its sympathy with the Liver. These blood-vessels are so fine in their texture, and so susceptible of any cause of irritation, that the quantity of blood contained in them is sensibly affected by exposure to any atmospheric change: they are dilated by heat, and contracted by cold; therefore it is that sudden alternations from heat to cold, not only cause the size of the pores to be diminished (and thereby lessen the excretory action of the skin), but its blood-vessels also being contracted, a great proportion of the blood which they contained must be distributed to the more internal parts of the body; thus is inflammation of the Liver, lungs, &c., so frequently occasioned, or what is termed a "cold" is taken.

In children the minute vessels and pores of the Skin not only exceed in their aggregate diameter those of the adult, but are much more susceptible of every kind of irritation. How greatly beneficial there-

fore must be the effect produced on the constitution of children by paying such attention to the clothing, that the vessels of the Skin may be influenced as little as possible by external changes, and thereby prevented exercising an injurious influence on other organs of the body. Certain am I that there is no more prolific source of disease than the conduct of parents in exposing the extremities of children at all seasons of the year, in a climate so variable as ours, under the erroneous idea that it "hardens" them. It is true that instances are numerous of those who have been thus treated, and yet have grown up in the enjoyment of good health; but these are the exceptions rather than the rule. It was a practice of the Romans to immerse their children in the waters of the Tiber, under a similar idea; but it was found that the weakly died, and those who survived only manifested so strong a constitution as to be enabled to resist so strong an exciting cause of disease.

## CASES.

Miss H., aged 21, of robust appearance, had, for a period of four years, been afflicted with that peculiar eruption termed "Common Leprosy," for which she sought the advice of several physicians and surgeons, each of whom had prescribed one or more of those medicines which are supposed to have a specific action on such diseases of the Skin, but without any beneficial result being effected. Her general health was apparently good; but, on careful inquiry, I ascertained that she had frequently experienced the following symptoms: Head-ache and drowsiness, with occasional nausea on first rising in the morning; rest disturbed by unpleasant dreams; inactivity of the bowels, which although acted on regularly were not freely relieved; depression of spirits, with much languor, pain across the loins, and in the right shoulder; palpitation of the heart; the tongue was much coated. On examination I ascertained that the Liver was increased in size, and slightly tender on pressure.

I immediately adopted remedies to remove the congestion of the Liver, and in a few days succeeded in restoring that organ apparently to its natural size. I then prescribed some of those medicines to act on the Skin, which she had before taken without deriving any benefit, at the same time keeping up a slight stimulus on the liver. The result was most satisfactory; at the expiration of a fortnight the spots put on a more healthy appearance, and at the termination of three months scarcely a vestige of the disease remained.

Whether in this case congestion of the Liver was the cause or effect of disease of the Skin, it is impossible satisfactorily to determine; but it is sufficiently clear that no remedies could ever have succeeded in restoring the Skin to a healthy state, without first removing the disordered action of the Liver.

I have met with three other cases of this very troublesome disease, which for a length of time had baffled every mode of treatment, but which were speedily benefited by employing remedies to act simultaneously on the Liver and Skin. In every such case it is

essentially necessary that especial attention should be directed to the diet; for so great is the sympathy existing between the whole of the digestive organs and the Skin, that the latter, when in a state of disease, is sensibly affected by any irritation in the stomach or bowels: indeed the effect produced is sometimes so immediate, that I have known the irritation of the Skin to be very greatly aggravated within a few minutes after the reception of improper food into the stomach.

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Mr. K., aged 30, had, for twelve months, suffered much from an itching eruption of the Skin, especially extending over the loins, hips, and inner part of the thighs. On my first seeing him he complained of the following symptoms: Head-ache, especially in the morning; slight cough, with expectoration; spirits much depressed; appetite very variable; bowels inactive; aching pains in the shoulders and across the loins; urine scanty and high coloured; and the tongue coated. He informed me that for several years previous to

the eruption appearing, he had constantly suffered from derangements of the Liver and bowels; the latter being at one period much confined, and at another profusely purged. During the last two years he had frequently taken a mercurial pill, followed by a black draught, which had always afforded him relief, and especially allayed the irritation of the skin. He complained of no pain in the region of the Liver, but, on examination, I perceived that organ to be enlarged and somewhat tender on pressure.

In this case I adopted the remedies before recommended to remove the derangement of the Liver; gave strict injunctions as to diet; and recommended the use of a warm bath for the purpose of opening and cleansing the pores of the Skin. The beneficial effect of this plan of treatment was speedily manifested, and in ten days the eruption had wholly disappeared.

Were I to enumerate the many forms of eruption which I have found accompanied by, and dependent on disorder of the Liver, a space would be occupied

much greater than is desirable in the present treatise: suffice it to say, that erysipelas, boils, and many other complaints of the Skin and parts immediately subjacent, will invariably be found more or less influenced by irregularity in the function of the Liver.

Eruptions of the Skin in children are almost invariably dependent on derangement of the digestive organs, especially of the Liver; for as that organ is proportionably larger in the infant than in the adult, and the vessels of the skin more numerous and sensitive, the sympathy between these parts is in a corresponding degree increased; thus it is that the plan of treating disorders of the Skin in children, by employing remedies to act on the Liver, has long been found the most efficacious that can be adopted; but it too frequently happens that the cure is much retarded in consequence of the doses of the medicines being regulated by the degree and extent of the disorder



of the Skin, rather than by the derangement existing in the Liver; and it Will frequently be found that an eruption which has for a long period resisted the action of medicines administered in the ordinary quantity, will be speedily removed by the same remedies if given in much diminished doses; of this, would space permit, I might enumerate many cases, especially of that disorder affecting the heads of children, termed "Scald Head."

## CHAPTER VI.

### THE STOMACH.

THE Stomach is so intimately connected with the Liver, by the distribution of both nerves and blood-vessels, that it is more immediately affected by irregularity in the secretion of bile than any other organ of the body, and in its turn exercises a most powerful influence in causing and keeping up derangements of the Liver: thus it is that functional disorder of the Stomach is the most frequent cause of irregularity in the action of the Liver.

Through the medium of nerves, the one organ sympathizes with any irregularity in the functions of the other; but it is through the circulation of blood, that the Stomach is so affected by congestion of the Liver.

I have before stated that the artery which is distributed through the Liver is immediately connected with those which supply the Stomach, the veins also of the Stomach and intestines have no means of emptying themselves but into the Liver ; and therefore whenever the circulation in that organ is impeded, the circulation in the Stomach and intestines must be impeded also.

The Stomach, in common with every other part of the body, is dependent upon a proper action of the blood-vessels to enable it to perform its functions ; therefore if they be congested, its power of secreting the juices which are necessary for the purposes of digestion, as well as its capability of performing the other duties required of it, become impaired, and the various symptoms of indigestion result. But whether irregularity in the action of the Liver be the cause, or only the effect, of a disordered state of the Stomach, so great is the sympathy existing

between these organs, that remedies must be had recourse to which will act immediately on both before the derangement of either can be removed.

The following cases will illustrate some of the effects produced on the Stomach by congestion and inactivity of the Liver.

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#### CASES.

Captain R., aged 35, who had lately returned from the coast of Africa, consulted me in consequence of labouring under the following painful symptoms of indigestion, to relieve which various stomachic tonics had been employed without success: Loss of appetite; head-ache; depression of spirits; pain and a sensation of weight at the stomach, frequently accompanied by flatulency, nausea, and an aching pain in the arms immediately after eating; severe cramps in the legs at night; rest disturbed by unpleasant dreams; a nauseous taste in the mouth on first awaking. The bowels were inactive, and the tongue much coated.

My patient informed me that he had been subject to derangements of the Liver long previous to the above symptoms appearing, and his bowels being generally very inactive, he had been in the habit of frequently taking some form of purgative medicine. On examining the Liver, I found it slightly enlarged, and very tender on pressure.

I prescribed minute doses of calomel, blue pill, and ipecacuanha, combined with stomachic tonics, to be taken three times in the day; laid down strict rules to regulate the diet, and enjoined frequent equestrian exercise. On the following day my patient called on me to inquire if it were my intention that the medicines should produce a violent action on the bowels, as such had been their effect, although three doses only had been taken. I explained that this was occasioned by the minute doses of the mercurials stimulating the Liver, and thereby causing an increased secretion of bile, which had a purgative effect on the bowels, and desired him to continue the medicines in the manner I had previously directed. He called on me again at the expi-

ration of a week, when I ascertained that the increased action of the bowels had ceased after the second day, from which period the symptoms of indigestion had gradually lessened. I directed the same medicines to be continued, but to be taken only twice in the day. At the termination of another week my patient expressed himself much better than he had been for many months; the Stomach had almost recovered its wonted tone, and the Liver was apparently acting in a healthy manner. I now desired that each medicine should be taken but once in the day; the mercurial pill at night, and the stomachic tonic in the morning: this course was persisted in for a few days, when the remedies were gradually discontinued, my patient being in the enjoyment of good health. He has occasionally, at my advice, had recourse to the pills on perceiving any irregularity in the Stomach or Liver (avoiding every other medicine), and has for many months past been entirely free from any of those symptoms which had previously been the source of so much misery.

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I was requested to visit Miss J., aged 25, whom I found labouring under the following symptoms: Disinclination for food; sickness; flatulency, and general uneasiness after eating; much derangement in the function of the womb; head-ache; sleeplessness; pains across the loins and between the shoulders; a sensation as of cold water trickling down the back. The action of the bowels was irregular, being either very inactive or much relaxed; and the tongue coated towards the root. I ascertained that my patient had, from childhood, suffered from "*bilious head-aches*," and other symptoms indicative of derangement of the Liver; and on examination I found that organ tender on pressure, and slightly enlarged.

In this case I adopted remedies similar in their action to those mentioned in the preceding, and, with the same beneficial result, the whole of the symptoms gradually disappeared.

The following case will illustrate the manner in which nature sometimes endeavours to get rid of an excess of blood in the Stomach and bowels, occasioned by

congestion of the Liver, thereby giving rise to very alarming, although generally not fatal symptoms.

Mr. B., aged 32, had for several days experienced a sensation of weight at the Stomach, accompanied by loss of appetite, head-ache, &c., when he was suddenly attacked with sickness, and vomited a large quantity of blood; this was speedily followed by an evacuation of the bowels, consisting almost entirely of coagulated blood.

A surgeon was immediately in attendance, who prescribed remedies to act as a styptic to the Stomach, and at the same time to allay the irritability; but as the patient complained of no uneasiness or pain in the region of the Liver, no means were employed to stimulate that organ. The vomiting had continued for two days, when I was requested to visit him. I immediately placed my hand over the Liver, and, finding it considerably enlarged, determined to employ remedies to relieve the congestion of that organ, believing it to be the cause of the symptoms under which my patient



was labouring. I therefore directed a mustard poultice to be applied on the right side, and prescribed medicines to increase the action of the Liver, and at the same time to allay the irritability of the Stomach. A small quantity of blood was vomited shortly after my leaving him ; but from that period he experienced no recurrence of the attack.

In this case the vessels of the Stomach and bowels had become so much distended, that they allowed the blood to exude from them, and thereby gave rise to the formidable symptoms under which my patient was labouring at the time of my visit.

## CHAPTER VII.

### THE INTESTINES.

THROUGH the medium of the Intestines are occasioned some of the most common and troublesome of the effects of derangement of the Liver.

In treating of the action of the bile, I mentioned that the duty it is required to perform is to stimulate the bowels to a due performance of their digestive functions; to separate the nutritive from the injurious portions of food; and, by its stimulating effect throughout its course, to act as the natural purgative of the Intestines. If, therefore, the secretion of bile be diminished, or so vitiated as to be incapable of giving the necessary stimulus to the Intestines, the effects produced are, Imperfect digestion (from whence arises

incapability of separating the nutritious from the refuse portions of the food, whereby a part of the former is lost) ; and Inactivity of the bowels.

Constipation of the bowels is not only occasioned thus, but also by the impediment offered to the free circulation of their blood. The reader will bear in mind that all the veins of the bowels empty themselves into the Liver : if, therefore, the circulation in that organ be impeded, the circulation in the bowels must be impeded also. In consequence of this want of proper circulation of the blood, the minute vessels, whose duty it is to secrete a fluid for the purpose of moistening the contents of the Intestines, and of assisting the passage of the food, become impaired in their action ; and the muscles by which the contraction of the bowels is effected being clogged, their action also is impaired, and thus, in a two-fold manner, is constipation occasioned.

Relaxation of the bowels is frequently

produced by sudden excitement, and by those medicines whose action is directed solely to the Liver in consequence of an increased quantity of bile being secreted, which irritates the bowels and stimulates them to increased action.

The bowels being thus so immediately affected by any alteration in the secretion of bile, it will be readily understood why constipation is so common and troublesome a complaint. The reader will, I doubt not, have remarked, whilst perusing some of the cases mentioned in the preceding pages, that a distinction has been drawn between a *regular* and a *free* action of the bowels. This distinction is too commonly overlooked, it being generally deemed sufficient to ascertain that the action takes place at certain regular intervals, without regard to the quantity evacuated; and thus is the first step towards constipation, so frequently disregarded.

When in a properly healthy state, the

Intestines are stimulated to evacuate their contents as soon as the purposes of digestion have been completed and a certain quantity of excrement collected. But as the bowels, in common with every other part of the body, are greatly influenced by habit, if when the natural stimulus is given, the powers of the will refuse to respond, the bowels are obliged still longer to retain their contents; their susceptibility becomes diminished, and they cease to be acted on by the stimulus which had before been sufficient to ensure their action. But the injurious effect of this neglect does not terminate here; for the lining membrane of the bowels is covered throughout with myriads of minute absorbing vessels, which, like so many insects, are continually sucking up whatever fluid is placed in contact with them. They possess the wonderful power of discriminating between that which is injurious to the system, and that which may assist in supplying the natural waste of

the body ; but they cannot remain inactive ; therefore if the bowels become loaded with the refuse portion of food, these vessels are stimulated to absorb some portion of that which cannot but prove most prejudicial to the health of the frame. Thus is frequently occasioned that impurity of the blood which gives rise to eruptions of the skin, and disorders of other organs of the body. The contents of the bowels of necessity becomes hardened by this absorption of fluid, and thereby the power of evacuating becomes diminished and constipation again encouraged.

Such are some of the injurious consequences occasioned by neglecting to pay proper attention to the action of the bowels. If they were more generally known, I doubt not but many of those persons who have hitherto supposed that convenience might at all times be consulted, would be induced to respond more speedily to nature's call, and thereby

be prevented sowing those seeds of disorder, the fruits of which in after life are reaped with so much sorrow.

I have invariably found that nothing tends more to maintain a healthy action of the bowels than the habit of encouraging their evacuation at a stated period of the day, *whether there be a natural inclination or not*; by so doing, many persons whose sedentary occupations would otherwise tend to produce constipation are enabled to keep up a regular and free action. I have been in the habit of recommending those of my patients who have suffered from inactivity of the bowels to pursue this course; and, by so doing, they have assisted most materially in restoring a healthy action.

The manner in which piles, fistula, and other disorders connected with the lower Intestines, are occasioned by torpidity of the Liver, will be readily understood: thus, if the vessels of the bowels are congested in consequence of the im-

pediment offered to the free passage of their blood, according to the known laws of gravitation those at the lower or more depending part will become the most distended. This overdistension constitutes piles. Fistula, or abscess at the extremity of the bowels, is frequently consequent on piles; but is also occasioned when, from congestion of the Liver, the veins in the neighbourhood of the lower Intestine are but slightly gorged, low inflammation is set up, and the formation of matter ensues. Those persons who have unfortunately suffered from either of these very prevalent and troublesome disorders, too well know the very painful effects which are occasioned by the use of any powerful purgative, in consequence of such remedies stimulating the bowels to contraction without removing the excess of blood with which their coats are distended.

It has been very commonly imagined that piles and fistula are occasioned by



a disordered action of the lungs, so frequently are they attendant on diseases of those organs ; but from careful observation I am led to believe that they never exist without more or less derangement of the Liver.

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### CASES.

Mr. R., aged 45, had for several years suffered from constipation of the bowels, attended by giddiness, loss of appetite, depression of spirits, and many other painful consequences of this complaint ; he had also been subject to rheumatism, especially lumbago. To relieve these symptoms he had been in the habit of taking active purgative medicines, but had found that the bowels were becoming more and more inactive, and required a stronger stimulus to ensure their action. Being desirous, if possible, of tracing my patient's complaint to its original cause, I inquired into various circumstances connected with his previous habits of life, and ascertained that, to the age of 25 he had enjoyed good health, his bowels being more than usually active.

Up to that period he had been engaged in an active occupation, which he then exchanged for a more sedentary employment: he also informed me that he was at that time so circumstanced as to be unable to pay proper attention to the action of the bowels. From that period I was enabled to trace the commencement of his malady. The bowels had, year after year, gradually become less susceptible of the natural stimulus, until they were now so inactive as scarcely ever to be relieved without the employment of medicine. I found the Liver slightly enlarged, but unattended by tenderness.

I prescribed a draught, consisting of a small quantity of a mineral acid and saline aperient, to be taken three times in the day, and a pill composed of minute doses of blue pill and ipecacuanha, night and morning; the pills being to act on the Liver, and the draught to give a gentle stimulus to the Intestines. I likewise gave strict injunctions as to diet; recommended frequent exercise, especially on horseback; and desired him to adhere to the rule I have before recommended, to induce regu-

larity of the bowels. At the expiration of three days no action had been occasioned; but as there was no other urgent symptom, I forbade the use of any active medicine, and directed the employment of an enema, to be continued every morning. This produced the desired effect. At the expiration of three weeks I was pleased to find that the bowels were becoming much more active; I then diminished the quantity of the medicines, which I directed to be gradually discontinued: at the expiration of two months he informed me that his ailment was apparently removed. Two years have now elapsed, and the bowels have continued in good action, there having been scarcely any necessity for taking the medicine, and, greatly to the surprise of my patient, he has for that period been entirely free from rheumatism.

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Mr. K., aged 43, consulted me in consequence of suffering from constipation of the bowels, frequently accompanied by pain across the loins; rheumatism in the hip; loss of

appetite; and head-ache. I was enabled to trace this derangement to anxiety of mind, inattention to the state of the bowels, and sedentary occupation.

The plan of treatment I adopted was very similar to that mentioned in the preceding case, and was happily attended with the like favourable results; by giving a gradual stimulus to the Liver and bowels, and by encouraging a more regular habit, my patient, at the expiration of six weeks, was enabled to inform me that his bowels acted with more freedom and regularity than they had done for many years.

In each of these cases the reader will remark that rheumatism is one of the attendant symptoms; and I may here mention, that I have found that complaint so much more common amongst those persons affected with inactivity of the Liver, and have experienced so much success in the treatment of such cases by carefully attending to the state of that organ, that I am led confidently to believe

that inactivity of the Liver, is one of its most common predisposing causes. This, at first sight, may appear scarcely possible, but if we consider the nature of rheumatism, and the influence which the Liver possesses over the parts usually affected, the connexion between these complaints will be more readily understood.

Rheumatism may be described as an excess of blood, either in the substance of a muscle, or in the thin membrane in which it is sheathed: in the acute form there is fulness of the blood-vessels, with increased action; in the chronic form, simple congestion only. Exposure to sudden alternations of temperature is most commonly the immediate exciting cause; the effect is produced thus: The vessels near the surface of the body are contracted by sudden cold; but reaction speedily takes place, and an increased circulation of blood in the part is the result. If the blood-vessels possess a

healthy power of contraction they are enabled to resist this increased action; but if from any cause their power of contraction be weakened, their elasticity is overcome and congestion ensues. In order that this effect of cold may be more clearly understood, I will illustrate it by an example familiar to most of my readers. If the eye be exposed to a current of cold air, reaction speedily takes place, the action of the blood-vessels of the thin membrane covering the eye will be increased, and the eye become what is termed bloodshot. This appearance is produced in consequence of the minute vessels (which had previously only admitted the white thin portion of the blood) being preternaturally distended and giving admittance to the red or thicker part. If by the employment of appropriate remedies the first inflammatory action is subdued, it will still be found that the vessels remain distended, not having sufficient power to contract on their con-

tents; and stimulating remedies must be had recourse to before these vessels can recover their accustomed diameter, or assume their wonted appearance.

If, then, predisposition to rheumatism depends on a diminished power of contraction in the vessels of the parts usually affected, it will readily be seen in what way congestion and inactivity of the Liver may act as a predisposing cause.

I have before mentioned the sympathy which exists between the Liver and skin; this must, in some measure, be shared by the minute vessels situated contiguous to the latter; and as congestion of the Liver so commonly impedes the general circulation of the blood, those vessels which are the most minute, and therefore possess the least power of contraction, must, of necessity, be the most likely to be weakened by any such impediment. Thus the minute vessels of the parts near the surface of the body

are affected in a two-fold manner, and these are the portions of the body most commonly affected by rheumatism.

Lumbago is a rheumatic affection of the muscles of the lower part of the back and loins, which muscles are situated in close contact with the intestines; and although the blood-vessels of these parts have no immediate communication, still it is manifest, from their close contiguity, that the one must be more or less influenced by the state of the other; therefore if the bowels are congested in consequence of an impediment offered to a free circulation of their blood by inactivity of the Liver, the vessels of the muscles of the back must in some measure be similarly affected, and therefore rendered more susceptible of the effects of cold.

So confident am I that inactivity of the Liver and bowels is the most frequent predisposing cause of lumbago, that I believe very few cases of that complaint



will be met with where the former derangements have not previously existed. How frequently does it happen that lumbago follows a disordered state of the stomach and bowels, occasioned by improper food or irregularity in the diet.

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#### CASE.—*Piles and Fistula.*

Mr. H., aged 34, consulted me in consequence of suffering most severely from Piles, with great irritation at the extremity of the Intestines: this had existed for several months, and was accompanied by congestion of the Liver and bowels. I ascertained that during the earlier period of my patient's life he had been constantly subject to bilious attacks; but his employment of late years having been of a more sedentary nature, much inactivity of the Liver, with its concomitant symptoms, had been induced.

I prescribed medicines to give a slight stimulus to the Liver and bowels, and an astringent ointment to be applied to the "piles"

night and morning. In three days my patient experienced the most decided benefit; the swelling and irritation being considerably lessened, and the action of the bowels gently increased. I directed the medicines to be continued, and in ten days the ailments were entirely removed. I then desired him to take a pill occasionally to act on the Liver; by so doing he has kept that organ in a more healthy state, and prevented a recurrence of his very troublesome malady.

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I may here notice an error into which persons are so frequently led in their anxiety to increase the strength of those whose physical powers are much weakened. It is too commonly the practice on observing a gradual diminution of strength, unaccompanied by other symptoms indicative of derangement of any particular organ of the body, to ply the sufferer with food as frequently and in as large quantities as possible, under the impression that such a course *must* con-

duce towards restoring the strength; but by so doing much mischief frequently accrues; *for it is impossible that such a state of the system can exist without its being occasioned by some organic derangement*: impaired action of the digestive organs is the most frequent cause; and if such be the case, how is it possible that an increased proportion of food can be beneficial if there be not the power to digest even the ordinary quantity? The cause of the weakness must first be carefully ascertained and removed before any benefit can be expected to accrue.

I have continually observed, that where a large quantity of food has been unattended by any increase of strength, in consequence of the want of power in the stomach to digest it, that a much diminished portion, properly regulated, has induced the most marked improvement in the health of the body.

## CHAPTER VIII.

### THE KIDNEYS AND BLADDER.

THERE being no immediate communication between the Liver and Kidneys, either by nerves or blood-vessels, and the character of their secretions being apparently so dissimilar, it would at first sight be difficult to understand how any close sympathy could exist between these organs, had it not been ascertained, by chemical analysis, that the ultimate component parts of the bile and urine are nearly identical; thus showing that the action of each of these organs is to remove a certain portion of those impurities which collect in the blood during its circulation through the body, and from them to form their separate secretions, each so necessary to the health of the frame.

If, therefore, the one organ is unable to perform its allotted task, the other is called on to supply the deficiency, and thus is it that Congestion and Inactivity of the Liver is so frequently the cause of an impaired secretion of bile, and ultimately of disease of the Kidneys. The symptoms of functional derangement of the Kidneys are frequently experienced when the indications of disordered action of the Liver are so obscure as to pass unnoticed, and thus remedies are employed solely to allay the action of the Kidneys, as if they only were at fault; whereas they are merely answering the call made on them to increase their secretion, in order that the blood may be freed from those impurities which it is the duty of the Liver to remove, but, being inactive, is unable to perform.

In such cases I have frequently found that the disordered action of the Kidneys, which had for several weeks resisted the various remedies employed, has been in

a few days entirely removed by carefully attending to the state of the Liver.

The Bladder is more or less affected by inactivity of the Liver whenever the Kidneys are called on to increase their action ; for if an extra quantity of the acrid particles is present in the urine, the fine membrane lining of the Bladder becomes irritated ; and thus it is that persons who have for several years suffered from inactivity of the Liver are so frequently subject to irritability and other disorders of the Bladder.

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#### CASE.

Mr. W., aged 33, consulted me in consequence of suffering from the following symptoms: Pain across the small of the back ; urine thick, and depositing a red-coloured sediment ; irritability of the Bladder. In addition to these indications of disordered action of the Kidneys, he complained of headache ; depression of spirits ; languor, and loss of appetite. The bowels were acted on *regu-*

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*larly*, but not *freely*. I ascertained that he had for many years been subject to bilious attacks, but that the disordered action of the Kidneys had only become apparent about two months previously; and although various remedies had been employed for its removal, my patient's suffering had gradually increased.

Believing the state of the Kidneys to be dependent on impaired action of the Liver, I directed my attention principally to the state of that organ, and prescribed remedies to increase its action, as well as to allay the irritability of the Kidneys and Bladder: this plan of treatment answered my most sanguine expectations; in five days the painful symptoms were greatly alleviated, and at the expiration of a fortnight, both the Liver and Kidneys appeared to perform their functions with due regularity.

## CHAPTER IX.

### THE WOMB.

THE manner in which the Womb is affected by a deranged action of the Liver is more obscure than the effects produced on any other part of the body; there being no immediate communication between these organs, neither have they any action in common; but yet the intimate sympathy which exists between the Womb and digestive organs is universally acknowledged, so commonly does it occur that any derangement of the one is followed by impaired action of the others.

It is through the medium of the intestines that the Womb is commonly influenced by Congestion of the Liver. The connexion between those parts is exemplified by the fact that the most powerful medicines which are administered to



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stimulate the Womb produce their effect by first irritating the intestines, which irritation is communicated to the Womb. If, then, the blood in the vessels of the bowels is impeded in consequence of an obstruction in the Liver, the vessels of the Womb must likewise become more or less congested, whereby are occasioned functional derangements, differing according to the age and constitution of the person affected ; in one the natural secretion is either diminished or suspended beyond the regular period, whilst in another there is an effort of nature to get rid of the excess of blood, and increased secretion is the result. I am confidently of opinion that every derangement in the functions of the Womb is considerably aggravated by Inactivity of the Liver and therefore consider it of paramount importance that the secretion of bile should, in all such cases, be most carefully attended to.

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THE reader of this treatise can scarcely have failed to perceive the intimate connexion which exists between every organ of the body. I have taken Congestion and Inactivity of the Liver as the first link in the chain of symptoms, and have endeavoured to show in what way those derangement produces many injurious effects on other organs of the body. Far be it from me to attribute to derangement of the Liver every disorder of which it may be an attendant symptom; but I do assert that medical men are constantly baffled in their treatment of chronic diseases through overlooking what appear but symptoms of very slight disorder of the Liver, unmindful of the fact that if irregularity in the action of that organ exercises an injurious influence on the body when otherwise in a healthy state, the effect must be greatly increased on those parts which are diseased, they being much more susceptible of every kind of irritation.

It is the duty of the practitioner of

medicine to trace back the chain of symptoms, link by link, from the principal feature of the disorder to the original exciting cause ; but it frequently happens that one link is so apparent, whilst another is so obscure, that with all his discrimination he is for some time unable to trace the chain to its origin ; this difficulty is commonly occasioned either by his overlooking some slight symptom, or by the patient's omitting to mention some circumstance, thinking it too insignificant to produce any effect on the disease.

The power of tracing correctly the various symptoms to their origin is absolutely necessary to a physician or surgeon, and he who possesses the tact and discrimination whereby he is enabled to discover at first sight their relative importance, can alone be considered a skilful practitioner of medicine.

